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a decoder for decoding the video signal into at least one original color signal associated with a color of the original image;

a processor coupled with the decoder for receiving the original color signal, and for generating an adjusted color signal from the original color signal for compensating for a first type of color blindness; and

display circuitry structured to cause the screen to display the original color signal and the adjusted color signal simultaneously.

2. (Amended) The system of claim 1, wherein the processor is structured to generate two adjusted color signals for compensating for the first and a second type of color blindness, and further comprising means for selecting to output one of the first and the second adjusted color signals.

3. The system of claim 1, wherein the original color signal is associated with a series of ordered sets of original samples, and wherein the adjusted color signal is associated with a series of ordered sets of samples adjusted from the original samples according to a first color gamut adjustment predefined for the first type of color blindness.

4. The system of claim 3, wherein the original samples represent original values, each original value associated with a content of a respective one of a plurality of predefined primary colors, the adjusted samples represent adjusted values, each adjusted value associated with a content of a respective one of the primary colors, and wherein the system further comprises a memory coupled with the processor and having stored therein the sets of original values and the first set of adjusted values.

5. The system of claim 4, further comprising means for combining the original samples of a single ordered set thereby generating a single sample for inputting into the memory as an address.

6. The system of claim 4, wherein the memory reads out a single sample for each input ordered set of original samples, and further comprising means for extracting from the sample output by the memory an ordered set of adjusted samples.

7. The system of claim 1, further comprising a screen coupled with the processor for receiving the adjusted color signal, the screen thereby displaying in real time color images adjusted from the original images for compensating for the first type of color blindness.

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8. (Amended) A method for adjusting real time color images encoded in a video signal suitable for producing a display on a screen comprising:

decoding the video signal into at least one original color signal associated with a color of the original image;

generating an adjusted signal from the original color signal according to a first transform associated with a first type of color blindness; and

applying the video signal and the adjusted signal to the screen;

allowing a user to select either the video signal or the adjusted signal; and

thereafter applying only the selected signal to the screen.

9. (Amended) The method of claim 8, further comprising:

using a reference color image to generate at least one reference color signal associated with a color of the reference image; and

generating the adjusted signal from the reference color signal according to a tested transform associated with a tested type of color blindness.

10. (Amended) The method of claim 8 wherein accepting is by using a remote control unit.

11. (Amended) The method of claim 9, further comprising generating a second adjusted signal from the reference signal according to a second tested transform associated with a second tested type of color blindness.

12. (Amended) A method for adjusting real time color images encoded in a video signal suitable for producing a display on a screen comprising:

decoding the video signal into at least one original color signal associated with a color of the original image;

using a reference color image to generate at least one reference color signal associated with a color of the reference image;

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generating an adjusted signal from the reference color signal according to a tested transform associated with a tested type of color blindness;

applying the adjusted signal to the screen, the screen thereby displaying color images adjusted for the first type of color blindness;

partitioning the screen into a plurality of sections, wherein the adjusted reference image is displayed in only one of the sections;

accepting an input from a viewer as to whether the adjusted reference image is desirable; and

if the adjusted reference image is desirable, using the tested transform as the first transform.

13. The method of claim 8, further comprising digitizing the original color signal to produce at least one original value, and wherein generating is performed by looking up in a memory an adjusted value corresponding to the original value.

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14. (Amended) A method for adjusting real time color images encoded in a video signal suitable for producing a display on a screen comprising:

decoding the video signal into at least one original color signal associated with a color of the original image;

digitizing the original color signal to produce at least one original value;

generating an adjusted signal from the original color signal according to a first transform associated with a first type of color blindness by looking up in a memory an adjusted value corresponding to the original value;

applying the adjusted signal to the screen, the screen thereby displaying color images adjusted for the first type of color blindness;

selecting a set of coordinates for defining a color space;

selecting a type of color blindness;

characterizing the selected type of color blindness with respect to the coordinates as at least one discernible region in the color space;

selecting a color gamut adjustment that maps at least one region outside the discernible region into the discernible region;

generating the original values and the adjusted values that perform the color gamut adjustment; and

storing the original values and the adjusted values in a look up table in the memory.

15. The method of claim 14, wherein the memory is an EPROM, and wherein storing is performed by burning in the EPROM.

16. The method of claim 14, wherein selecting includes contracting a portion of the discernible region.

17. The method of claim 14, wherein selecting includes rotating at least a portion of one of the regions.

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18. (New) A device for generating compensated video signals, comprising:
an input for accepting an original video signal;
a video transformer for creating a video signal compensated for a type of color blindness from the original video signal;
a partitioner structured to partition a display into a first and a second section; and
a display generator structured to cause the original video signal to be shown in the first section and the compensated video signal displayed in the second section.

19. (New) The device of claim 18, further comprising:
a second input structured to accept a signal indicating that either the original video signal or the compensated video signal is preferred; and
a second display generator structured to cause only the preferred signal to be shown on the display.

20. (New) The device of claim 18 wherein the video transformer is structured to generate more than one video signal, each video signal compensated for different degrees of the same type of color blindness or for different types of color blindness.

21. (New) The device of claim 20 wherein the display generator is structured to cause all of the compensated video signals to be shown simultaneously, each in a different section of the display.

22. (New) The device of claim 18 wherein the video transformer is structured to create the compensated video signal based on a pre-defined color map.

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23. (New) The device of claim 22 wherein the video transformer comprises a memory lookup color table.
24. (New) The device of claim 22 wherein the video transformer comprises a memory color transform calculator.
25. (New) A method for displaying a color compensated image, comprising:
accepting an original video signal;
transforming the original video signal into a video signal compensated for a type of color blindness;
simultaneously displaying both the original video signal and the transformed video signal on a display;
accepting a selection of a preferred video signal; and
displaying only the selected video signal on the display.
26. (New) The method of claim 25, further comprising storing the selection.
27. (New) The method of claim 25 wherein accepting a selection of a preferred video comprises accepting a signal created by a remote control.
28. (New) The method of claim 25, further comprising generating a plurality of video signals compensated for different degrees of color blindness, and simultaneously displaying the plurality of video signals on the display.
29. (New) The method of claim 25, further comprising generating a plurality of video signals compensated for different types of color blindness, and simultaneously displaying the plurality of video signals on the display.
30. (New) The method of claim 25 wherein simultaneously displaying both the original video signal and the transformed video signal occurs after a signal is received.
31. (New) The method of claim 30 wherein the signal is automatically periodically generated.

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32. (New) The method of claim 31 wherein the signal is automatically generated at one year intervals.
33. (New) The method of claim 30 wherein a user causes the signal to be generated.
34. (New) The method of claim 25 wherein transforming the original video signal into a video signal compensated for a type of color blindness comprises using a color table lookup stored in a memory device.
35. (New) The method of claim 25 wherein transforming the original video signal into a video signal compensated for a type of color blindness comprises performing calculations based on the original video signal.
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